

REMARKS

In the Office Action mailed September 11, 2007, the Examiner initially rejected claim 1-5, 7-8, 10, 13-15, 18 and 22-39 under 35 USC §103(a) as being unpatentable over the Ehlers U.S. Patent No. 5,572,438 in view of the Budike U.S. Patent No. 6,122,603. Claims 9 and 20 were also rejected under §103(a) as being unpatentable over the Ehlers, Budike and the Sterling U.S. Patent No. 4,317,175. Claims 16-17 were rejected under §103(a) in view of the Ehlers and Budike references and in further view of the Routtenberg U.S. Publication No. 2002/0049717. Claim 19 was rejected under §103(a) as being unpatentable over the Ehlers, Budike and Lortz U.S. Patent No. 6,876,889.

Reconsideration of the above claim rejections is respectfully requested in view of the foregoing claim amendments, as well as the following arguments for allowance.

Independent Claim 1

By the present response, independent claim 1 has been amended to more particularly indicate that the method is directed to managing the demand for a commodity delivered to a plurality of customer sites where each of the customer sites includes a plurality of devices that use the commodity. As indicated by claim 1, the utility defines an energy management program that includes a subset of the plurality of devices across the plurality of customer sites for which usage of a commodity may be selectively managed by activating the energy management program. The instantaneous rate at which the commodity is being delivered to each of the devices is received at the utility.

Upon receiving the instantaneous rate at the utility, the utility determines, in real time, a capacity of the commodity that can be managed by the utility by activating the energy management program. The capacity of the commodity that can be managed is determined by combining the instantaneous rate at which the commodity is being delivered to the devices of the subset of the plurality of devices. Based upon the determined capacity of commodity that can be managed, the utility selectively activates the energy management program to manage the usage of the commodity by the subset of devices.

After the energy management program has been activated, the utility determines the actual consumption of the commodity at each of the plurality of devices following the activation of the program. Based upon the measured consumption, the utility can verify, in real time, the management of commodity usage for each of the plurality of devices following activation of the program.

As described above, independent claim 1 describes a method that allows the utility the ability to have a verifiable load reduction system such that the utility can curtail capacity loads when needed to allow the utility to manage consumer demand and prevent the grid from exceeding the utility's generation and distribution system maximum capacity limits. As indicated above, claim 1 requires the steps of both determining a capacity of the commodity that can be managed by activating the energy management program and the subsequent verification that the activation of the energy management program reduces the commodity usage. As required by claim 1, the utility defines an energy management program that includes a subset of the plurality of devices across the plurality of customer sites. Typically, this subset groups a plurality of similar end-use devices such that the energy management program can be activated to reduce the commodity consumption by the similar devices grouped within the energy management program. Since the utility determines a capacity of the commodity that can be managed by activating the energy management program, when the load on the utility begins to reach a maximum capacity, the utility can selectively activate the energy management program to manage the usage of the commodity by the subset of devices.

In rejecting independent claim 1, the Examiner initially stated that the applicant's own Ehlers '438 reference taught the step of defining an energy management program that includes a subset of the plurality of devices. However, in the portions of the Ehlers' 438 reference cited by the Examiner, the Ehlers '438 reference does not teach or suggest defining an energy management program that includes a subset of a plurality of devices across a plurality of customer sites. Instead, the Ehlers '438 reference simply teaches that the system includes computer programs that perform certain functions on the

system for the customer. This is not the type of energy management program defined at the utility required by independent claim 1.

As the Examiner correctly indicated, the Ehlers '438 reference does not teach of suggest many of the limitations required by claim 1, including the last three paragraphs of claim 1, as set forth by the Examiner.

In the Office Action, the Examiner cited the Budike '603 patent to teach these features required by claim 1. The applicant hereby strongly disagrees with such finding by the Examiner.

The Budike '603 reference is directed to a facility management system that is designed to limit the use of a utility commodity at an individual facility that may include multiple energy meters, such as illustrated in Fig. 2. In the facility management system taught by the Budike '603 reference, management of the utility consumption is the focus of a system meant to reduce the operating cost for the facility. The Budike reference teaches a master meter 1 that receives input from a series of individual meters 3-17. Each of these meters includes a sensor that is connected to the master meter such that the master meter receives information from each of the individual meters. The master meter includes a central processing unit that receives the real time sensing information and provides an output to a computer 39 for subsequent storage, retrieval and other computer functions, including controlling utility consumption, regulation, shut downs, economic tracking and reporting functions.

The master meter 1 is clearly taught as being associated with a single facility and operable to monitor, control and regulate the energy consumption by the individual facility. As the Examiner recognizes in the Office Action, the Budike '603 reference clearly does not teach locating the master meter 1 or the computer 39 at the utility, as required by independent claim 1. Instead, the Examiner argues that, based upon Official Notice, one of ordinary skill in the art would have been motivated to utilize the master meter 1 at a utility. The applicant strongly disagrees with such finding by the Examiner.

Throughout the Budike '603 reference, the reference clearly describes reducing energy consumption by a facility to reduce the cost of the energy consumption. The Examiner primarily relied upon col. 7, lines 59-66 of the Budike '603 reference when rejecting the claims in the pending application. In this portion of the patent specification, the Budike reference teaches a program on a control computer that is operable to reduce consumption by identifying and warning of individual utility consuming equipment and consumption rate changes, by anticipating peak loads, and by anticipating demand spikes and sags and then initiating a protocol to correct or eliminate inefficient energy consumption. This focus of the Budike '603 reference is in line with the purpose of a facility management system.

The teaching of the Budike '603 reference is directly contrary to the purpose of a utility. Specifically, a utility operates with the incentive to have each of its customer sites consume as much of the utility commodity as possible to enhance revenue for the utility. A limitation on this general operating principle is that the utility has incentive to limit commodity consumption only when the total commodity consumption approaches the maximum capacity for the utility. When the consumption approaches the maximum capacity, the utility has incentive to reduce commodity consumption, which is the focus of the present application, and specifically claim 1.

Claim 1 requires the step of determining, at the utility, a capacity of the commodity that can be managed by the utility by activating the energy management program, where the capacity is determined by the instantaneous rate at which the commodity is being delivered to the subset of the plurality of devices. The Budike '603 reference clearly does not teach or suggest this step required by claim 1. Further, this step allows the utility to determine how much of a commodity can be managed by activating an energy management program, where the energy management program includes a subset of devices across a plurality of customer sites. Although the computer 39 taught by the Budike '603 reference receives output information from the master meter and can

monitor the real time consumption of various meters, there is no teaching or suggestion of determining a capacity of commodity that can be managed, as required by claim 1.

Further, a person or ordinary skill in the art would not be motivated to apply the teaching of the Budike '603 reference or the Ehlers '438 reference to a utility, since both of these references are specifically directed to circuits and systems residing on a customer site that allows the customer site to manage and control the facility or the customer site energy consumption.

Claim 1 further requires the step of selectively activating the energy management program at the utility to manage the usage of the commodity by the subset of devices at the plurality of customer sites and, after activation of the energy management program, determining an actual consumption of the commodity at each of the devices such that the utility can verify, in real time, management of the commodity usage. This ability of the method of claim 1 allows the utility to activate the energy management program and determine, in real time, whether the activation of the energy management program reduced the amount of commodity usage for the plurality of devices. Once again, the Examiner cited the same portion of the Budike reference in rejecting these limitations of claim 1. Specifically, the Examiner cited col. 7, lines 59-66. This portion of the Budike '603 reference clearly does not teach or suggest the activation of an energy management program and the subsequent determination of whether the activation of the program had the desired effect of reducing commodity consumption. Therefore, independent claim 1 is believed to be allowable over the Budike '603 reference cited by the Examiner.

Claims 2-5, 7-10, 12-20, 22-28 depend directly or indirectly from claim 1 and are thus believed to be allowable based upon the above arguments for allowance, as well as in view of the subject matter of each claim.

Specifically, claim 2 requires the step of measuring a rate and a change in the rate at which the commodity is being delivered to each device of the subset of devices after activation of the energy management program. This feature is not shown or taught by either of the references cited by the Examiner. The ability of the method required by

claim 2 to measure the rate or change in the rate after the activation of the energy management program allows the system to determine whether the activation of the energy management program actually reduced commodity consumption at each of the individual devices. This measurement allows the utility to determine which of the devices was successful at reducing the amount of commodity being consumed. Once again, this feature is not shown or taught by either of the references cited by the Examiner.

Claim 3 requires the further step of determining an actual capacity of commodity that was saved by activating the energy management program. Once again, this feature is not taught or shown by either of the reference cited by the Examiner.

In rejecting claim 4, the Examiner cited the Ehlers '438 reference, and specifically col. 1, lines 38-48. This portion of the Ehlers reference describes standard utility rate tariffs that are the basis for utility billing for the commodity used by the customer during a given billing period. Rate tariffs specify the rate at which the utility will bill the customer for kilowatt hours consumed. These rates apply to kilowatt hours used and do not relate to incentives that are paid for kilowatt reductions. As required by claim 4, the utility provides one of an alternate rate and a billing adjustment to a customer as a function of the actual measured commodity consumption reduction for each of the customer devices during activation of the energy management program. Thus, the billing adjustment, or alternative rate, is provided to customers only if the commodity consumption is reduced at the customer site during the activation of the energy management program. This ability allows the utility to provide incentives to those customers that actually have reduced commodity consumption during the activation of the energy management program. This step prevents free riders from benefiting from an energy management program where the amount of energy consumed by the customer is not reduced during an energy management program activation. Clearly, this feature is not taught or described in the Ehlers '438 reference.

Independent Claim 29

In rejecting independent claim 29, the Examiner cited the same reasons as set forth in the rejection of claim 1. For the same reasons as set forth above in the arguments for allowance of independent claim 1, claim 29 is believed to be allowable over the combination of references cited by the Examiner.

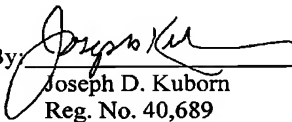
Claims 30-39 depend directly or indirectly from claim 29 and are thus believed to be allowable based upon the above arguments for allowance, as well as in view of the subject matter of each of the claims.

Conclusion

Based upon the above arguments for allowance and previous claim amendments, claims 1-5, 7-10, 12-20, 22-39 are allowable over the combination of references cited by the Examiner. The Examiner is invited to contact the applicant's undersigned attorney with any questions or comments, or to otherwise facilitate prosecution of the present application.

Respectfully submitted,

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